FOR DISCUSSION

GOVERNMENT OF ALBERTA
Mineable Oil Sands Strategy

NEED FOR POLICY

Alberta's oil sands are essential to a secure North American energy supply. The industry has grown substantially over the last five years, with production output now in excess of one million barrels per day. Production has the potential to double within the next five to seven years, and triple by 2020, if proposed developments proceed. Most of the area suitable for oil sands mining in Northern Alberta will be proposed for, or under, development within the next decade.

The Government of Alberta uses an integrated approach to development of natural resources so environmental, social and economic issues are considered. Policies and strategies developed in consultation with Albertans guide public and private actions that contribute to sustainable resource and environmental management.

As development proceeds, a shift in the pattern of development on the landscape is occurring, from single projects separated by forest and forest land uses, to broad coverage of the mineable area by industrial activity, with several projects under development at the same time. This policy sets realistic expectations for the coordinated development of projects and for the coordination of mineable oil sands development as a whole with regional sustainable development goals. These expectations will provide greater certainty for regulators, industry and the public, which will reduce conflict and refocus our collective efforts.

SCOPE OF POLICY

This policy addresses oil sands mine development and environmental management. These areas are the direct responsibility of three ministries – Energy, Environment, and Sustainable Resource Development. This policy will also have implications for other ministries with direct responsibility for socio-economic development, infrastructure and Aboriginal people. This policy will supersede the Fort McMurray Athabasca Oil Sands Subregional Plan for the mineable oil sands area. Within the Mineable Oil Sands boundary, this policy supersedes portions of the following Resource Management Areas (RMAs) in the "Fort McMurray-Athabasca Oil Sands Subregional Integrated Resource Plan" (IRP):

- Athabasca - Clearwater*
- Mildred - Kearl Lakes
- Stony - Birch

***Exception** - Mining operations within the McClelland Lake Wetlands Complex portion of the Athabasca – Clearwater RMA, as amended in 2002, will continue to be managed under the direction of the RMA guidelines established in the IRP following public and Aboriginal consultation. Any amendment to the IRP or this policy, which changes the resource management direction in the McClelland Lake Wetlands Complex (as indicated on the attached map) will be referred to Cabinet for review and approval after public consultation.

POLICY GOAL

Alberta achieves full value from the mineable oil sands through continued development, while returning disturbed areas to self-sustaining boreal forest ecosystems and sustaining the adjacent regional environment.

POLICY COMPONENTS

1. The mineable oil sands area will be managed as a coordinated development zone.

2. Within the coordinated development zone, oil sands mining will have the highest priority.

3. The activities within the coordinated development zone will be constrained to sustain the adjacent regional environment.

4. Within the coordinated development zone there will be progressive, timely and seamless reclamation to a self-sustaining boreal forest ecosystem.

5. The environmental liabilities from oil sands mining will not be passed on to future generations.

6. Both existing and new operators will be expected to continuously improve their technology and methods.

FOR DISCUSSION

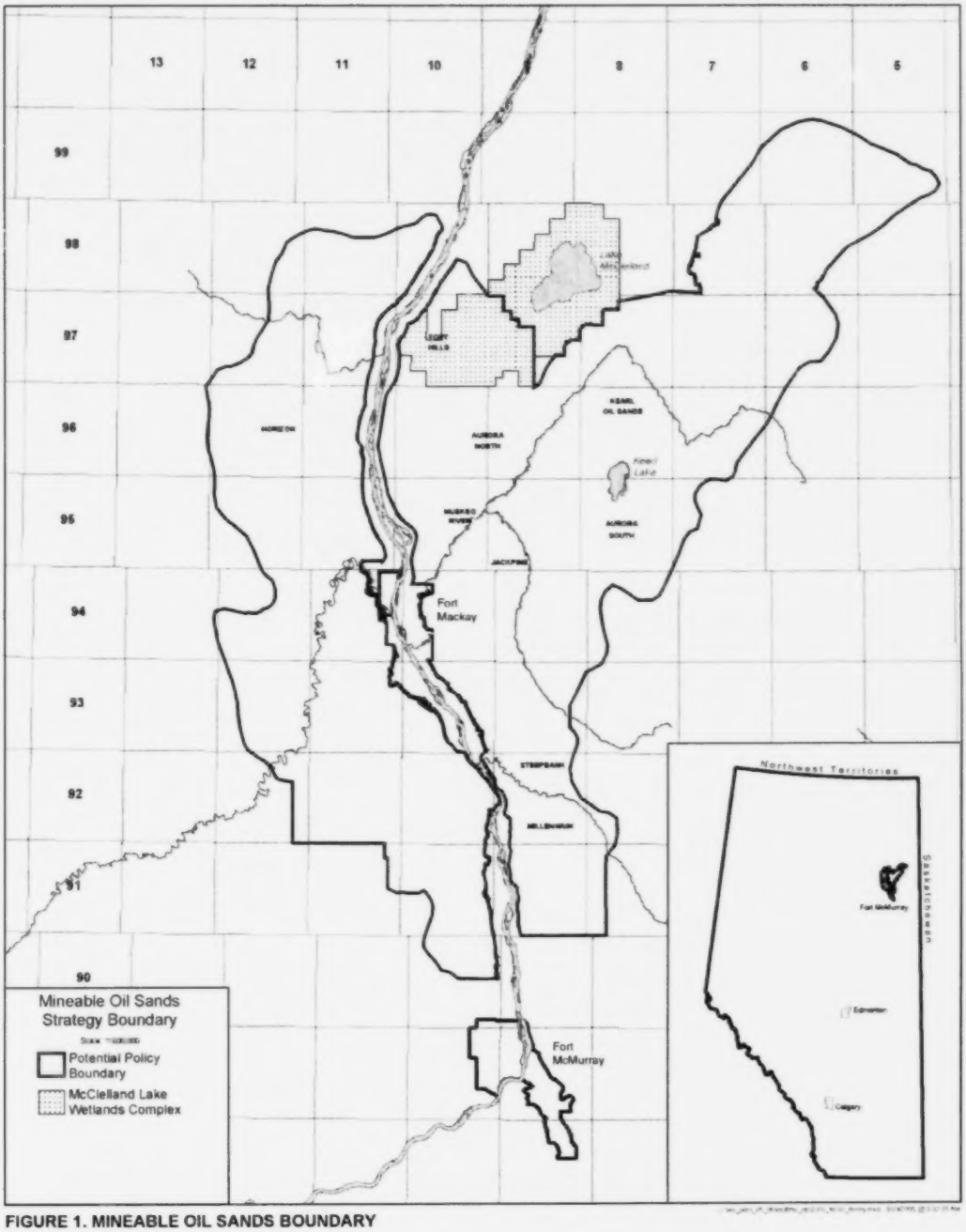

FIGURE 1. MINEABLE OIL SANDS BOUNDARY

POLICY DETAILS

1. **Mineable Oil Sands Area** - The mineable oil sands area will be managed as a coordinated development zone.

   This policy shifts from current project level management to zonal level management for mineable oil sands.

- The map of the coordinated development zone of the mineable oil sands area is illustrated in Figure 1. In the development zone, operators should coordinate development projects so that:
  - infrastructure is shared;
  - water is managed throughout the zone to optimize resource recovery, water use and to maintain the Athabasca River
  - compatible developments on the same lands can occur in a timely manner;
  - mine activities, reclaimed landscapes and reclaimed watersheds are topographically coordinated and functional across lease boundaries;
  - resource recovery is optimized; and
  - the area of surface disturbance is reduced, when it is feasible to do so.

- Government agencies will lead a partnership effort to plan efficient and coordinated development in the zone. Operators will work together and cooperate with regulators to manage development and reclamation activities.

- Government agencies will harmonize their plans, standards, and expectations to produce an efficient and understandable planning and regulatory system.

- The coordinated development zone includes existing mineable oil sand resources and may be adjusted to include new mineable areas or exclude areas based on oil sands resource economics of mining or other factors in the future. Deputy Ministers may make minor amendments to the map.

- The Athabasca River setback will be determined by regulators based on the value of the oil sands resource and the objectives established in the IRP considering the holistic nature of the river valley.

2. **Priority on Oil Sands** - Oil sands mining will have the highest priority within the coordinated development zone.

   This policy shifts from managing all resources in the mineable oils sands area with equal weight to placing higher priority on extracting mineable oil sands.

- Any part of the development zone, excluding areas on the map that are not part of the development zone, is available for mining.
  - The co-production and exploitation of other resources such as harvestable timber and aggregate resources is encouraged, in a manner compatible with oil sands mining and subject to the priority of oil sands mining in the development zone.

- Processing oil sands products and by-products to increase their economic value is encouraged in the development zone, and within the region.

- Government will use existing compensation mechanisms to address existing mineral rights. Government will apply these legal mechanisms if government abolishes existing mineral rights.

- Compensation in the form of timber damage assessments (TDA) will continue to be paid by oil sands operators when land is removed from the land base supporting local and regional forest industries. Forest industries or a delegated authority will receive the compensation. Government will ensure the funds are directed to the goal of ensuring sustainability of the industry through sustainable wood supply from crown lands

- The development zone will be managed recognizing oil sands mining as the priority resource use. Specific conditions related to the protection of wildlife habitat within the development zone will not be implemented prior to or during oil sands mining.
  - To ensure current and future generations continue to enjoy wildlife resources, habitat and population objectives will be achieved within a regional and provincial context through regional and provincial programs.
  - Management strategies will place a greater emphasis on other habitat locations at a regional and provincial scale in order to maintain viable caribou populations, recognizing that the locations of the best habitat will change over time.
  - As reclamation is completed, public lands management priorities will shift to manage for wildlife and other resources.

- Public recreational access will be addressed through land use planning and focused on areas outside of the development zone.

- Access to portions of the development zone for traditional uses may also be limited during mining and the availability of meat, fish, fur, and plant materials will be reduced until the land is reclaimed.

- Within the development zone, air quality expectations will be the same as the surrounding region.

3. **Regional Stewardship** - Activities within the coordinated development zone will be constrained to sustain the adjacent regional environment.

   This policy elaborates on stewardship expectations after the shift from project level management to zonal level management. This includes achieving regional targets outside the coordinated development zone.

- Operators will work within provincial and regional targets for emissions and discharges and ensure the environment surrounding the mineable development zone meets national, provincial, and regional guidelines for air, water quality, groundwater, biodiversity and sustainable ecosystems. Operators will work within provincial and regional targets to

ensure the Athabasca River quantity and quality meets regional, provincial and national guidelines.
  - Operators within the zone will actively participate in regional environmental forums and initiatives such as regional monitoring and environmental management systems.
  - Within the development zone, air quality expectations will be the same as the surrounding region.

- Existing and new operators will share responsibility for regional stewardship.

- Government will lead processes to set broad outcomes for the region.

- Government and industry will develop regional systems for cumulative environmental effects information gathering, assessment and management.
  - Accountability will be defined for the regional, zonal, and project level environmental management systems. Environmental management systems will link together through information sharing.
  - As the ability to monitor, report and assess the status of the regional environment and regional biodiversity increases through industry cooperative action, government will reduce the responsibilities of operators for regional information gathering in project level regulatory reviews.

4. **Focus on Reclaimed Landscape** - There will be progressive, timely and seamless reclamation to a self-sustaining boreal forest ecosystem within the coordinated development zone.

This policy shifts from the current focus of preserving pieces of the landscape during development to focus on doing the best job of reclamation of the surface mineable area.

- Mining operations will be viewed as a temporary impact that will leave behind a new valuable landscape for the benefit of future generations. Reclamation will not replace exactly what existed prior to mining, but will create an ecosystem that fits within the region. Reclamation of landscapes will be planned across lease boundaries. Mine planning and operations will be integrated with reclamation design and reclamation activity. Reclaimed landforms and aquatic ecosystems will have a natural look and will fit in with the adjacent landscape.

- Government will work in partnership with industry to achieve timely and progressive reclamation activities at the zonal and regional scales. Government's role will be to provide leadership and to establish final land use outcomes that are coordinated across project/ project, project/zone and zone/region boundaries. Operators will focus on development and implementation of adaptive reclamation plans and reporting reclamation progress. Government and industry will share responsibility for tracking and reporting the evolution of the regional landscape and the contribution of reclamation activities to outcomes.

- Within the surface mineable area, the objective of reclamation is to support opportunities for the use of surface resources to provide economic, environmental and social benefits from the landscape for future generations. This will include a return to at least pre-mining productivity related to operable forest and key wildlife habitat including moose, deer and black bear.

- Hydrological elements such as rivers, streams and wetlands must be planned by adjoining leaseholders and be designed to handle the predictable extreme watershed events. Dams and similar structures that require maintenance will not be allowed in the reclaimed landscape.

- Ecosystems will be established that are native to the region and able to recover after naturally occurring events like severe wildfires.

- Managed landscapes such as rangeland may be an acceptable land use but the land must be reclaimed to a soil standard that can support a boreal forest ecosystem.

- Government will use a range of regulatory and non-regulatory instruments (e.g. economic instruments) to create incentives for progressive reclamation.

5. **Intergenerational Equity and Future Legacies** - The environmental liabilities from oil sands mining will not be passed on to future generations.

This policy shifts from creating potential liabilities from development for future generations to address to a new focus on addressing potential liabilities from development in the generation that receives the benefits.

- The government expects reclamation research to be pursued actively through industry partnerships. Key objectives of this research are to reduce uncertainty with reclamation, avoid potential adverse cumulative effects, and identify and address potential environmental liabilities arising from development activities.

  Assurance for reclamation success will include regulatory tools and incentives to ensure, at a minimum, the value of current surface resources are replaced for future generations and that reclamation occurs on a timely and progressive basis.

6. **Continuous Improvement (CI)** - Existing and new operators will continuously improve their technology and methods

   This policy is a regulatory shift from project optimization to optimizing zonal resource recovery while maintaining the environment.

- Cooperative action, stewardship, effective planning and regulatory action can overcome constraints on development due to technology, the need to maintain the regional environment, and limits to renewable resources. Continuous improvement involves a

range of environmental and economic advances including more efficient societal use of production inputs (water, gas, electricity, heat, etc.) and the reduced production or discharge of wastes.

- Government will base their continuous improvement expectations on the need to maintain productive capability in the oil sands mining area within environmental performance and stewardship objectives and to remove constraints to further economic development that may be imposed by outdated technologies and methods.
  - Environmental and public interest approval reviews will consider continuous improvement needs.
  - Future approvals may set continuous improvement requirements for individual projects. Sector or regional environmental performance targets will assist operators to plan investment intensive improvement and will guide regulatory decision makers and the application of market mechanisms.
  - Government will consider the use of incentives, markets, other economic instruments and regulatory mechanisms to encourage continuous improvement activities.

- Existing and new projects will actively incorporate continuous improvement in technologies and methods.
  - Operators will be able to schedule investment intensive Continuous Improvement to correspond roughly with expansion in the area or with reasonable capital stock turnover periods, when incorporation of best environmental practices are reasonable to expect.
  - Operators should increase production while reducing the intensity of energy and material use, intensity of waste production, and emissions and discharges.
  - Operators will be expected to report annually to regulators and the public on continuous improvement-related measures.

DEFINITIONS

Adjacent regional environment	-the environment adjacent to the coordinated development zone
Boreal forest Ecosystem	-the boreal ecosystem is a boreal mixed wood subregion as defined by the forest areas of the northern North Temperate Zone, dominated by coniferous trees such as spruce, fir, and pine. Reclamation will include species native to this subregion and associations of species that together are characteristic of the subregion.
Compatible Developments	-developments that may be done in a manner that does not constrain development of mineable oil sands
Disturbed area	-the area of land within the development zone that is directly effected by mining operations and is not in a reclaimed state
Environmental Liabilities	-cost associated with reclaiming and mitigating impacts associated with mining, may include planned and unforeseen consequences/impacts
Mineable Oil Sands Area (Development zone)	- the geographical area where surface mining is economical in the Athabasca Oil Sands Area (TV/BIP less than 18)
Regional Area	- the geographical area adjacent to the development zone
Seamless Reclamation	-reclaimed landscapes with a natural form and function inside and across lease boundaries
Self-Sustaining	-the reclaimed area will maintain its existence and/or recover from natural disasters without human intervention
TDA	- timber damage assessments: an assessment of the commercial value of trees removed by activities of non-forestry industries, used exclusively for the purpose of compensation
TV/BIP	- Total Volume divided by Bitumen In Place, an indicator to delineate economic surface mineable oil sands reserves
Value	- energy, royalties, taxes, services, and employment